

INDEX

DOKLADY CHEMICAL TECHNOLOGY

Volumes 226-231, 1976

HH-77 E31.1 X

## DOKLADY CHEMICAL TECHNOLOGY

Volumes 226-231, 1976

(A translation of the Chemical Technology section of Doklady Akademii Nauk SSSR)

## A

Abramson, I. G. - 144  
Astashkin, V. V. - 113

## B

Barsegyan, O. A. - 110  
Baru, R. A. - 104  
Batotsyrenova, A. I. - 175  
Baulin, A. A. - 160  
Belen'kaya, T. A. - 26  
Berezhnoi, A. I. - 61, 66  
Berlin, A. A. - 96  
Bobylov, B. N. - 28  
Bondarenko, L. I. - 119  
Borovinskaya, I. P. - 169  
Bulle, C. - 150  
Butakov, A. A. - 13

## C

Churakova, I. K. - 96

## D

Danyushevskii, S. I. - 144  
Denisov, V. I. - 119  
Deryagin, B. V. - 110  
Dmitriev, A. M. - 182  
Dolukhanyan, S. K. - 169  
Dorokhov, I. N. - 80, 150,  
157, 173, 186  
Duryagin, V. A. - 132  
Dvadnenko, L. A. - 99

## E

Efankin, V. G. - 178  
Egorov, G. B. - 144  
Emel'yanov, V. I. - 166  
Épshtein, D. I. - 28  
Evstratov, V. F. - 74, 96

## F

Farberov, M. I. - 28  
Fedorov, V. B. - 7  
Fel'dshtein, M. S. - 74  
Frantsevich, I. N. - 116  
Freiman, L. I. - 20  
Frenkel', R. Sh. - 96

## G

Genkin, G. G. - 3  
Gerasimov, B. G. - 26  
Getmanchuk, I. P. - 138  
Gluzman, S. S. - 3  
Gurin, V. N. - 106

## I

Ignatov, V. N. - 71  
Ivanchev, S. S. - 39, 160  
Ivanov, V. A. - 166  
Izyneev, A. A. - 175

## K

Kafarov, V. V. - 68, 71, 80,  
93, 113, 135, 150, 157,  
166, 173, 178, 186  
Kalinin, P. I. - 7  
Kalmykov, A. N. - 135  
Kamenetskii, S. P. - 129  
Kapilevich, S. B. - 50  
Karpenko, G. V. - 55, 132  
Kern, É. M. - 17  
Kheifets, L. I. - 63  
Kholpanov, L. P. - 146, 163  
Klimenko, V. V. - 157  
Kolmakova, L. P. - 86  
Kolotyrkin, Ya. M. - 20  
Kol'tsova, E. M. - 173  
Kommissarov, Yu. A. - 178  
Korneva, T. D. - 39  
Korshak, V. V. - 175  
Kosmynin, A. S. - 77  
Kotel'nikov, D. D. - 129  
Krashenninnikov, N. A. - 74  
Krasil'nikova, N. A. - 36  
Kryukovskii, A. I. - 43  
Kubasova, L. V. - 33  
Kudryavtsev, N. N. - 190  
Kul'bich, T. S. - 119  
Kultan, B. I. - 55  
Kumalagov, I. A. - 66  
Kurtepov, M. M. - 104  
Kuslitskii, A. B. - 132

## L

Laskorin, B. N. - 46, 86, 119  
Lavrenko, V. A. - 116  
Lidorenko, N. S. - 24

Lipatov, L. N. - 80  
Lipatov, Yu. S. - 138  
Lisin, V. L. - 17  
Lobodyuk, I. A. - 50  
Lyashenko, L. P. - 93  
Lysenko, E. V. - 116

## M

Maksimov, E. I. - 13  
Maksimov, V. L. - 39  
Malinin, Yu. S. - 182  
Malyusov, V. A. - 146, 163  
Mandrusev, G. I. - 68  
Manukhina, T. I. - 36  
Maslennikov, B. M. - 50  
Medvedev, É. A. - 20  
Merzhanov, A. G. - 13, 169  
Meshalkin, V. P. - 71, 93,  
113, 135  
Mezhikovskii, S. M. - 96  
Mishustin, V. I. - 26  
Mogonov, D. M. - 175  
Moshkin, A. A. - 61

## N

Nalbandyan, A. B. - 169  
Neimark, A. V. - 63  
Nersesyan, M. D. - 169  
Nikiforov, Yu. V. - 144  
Nikolaev, A. V. - 103  
Novikov, S. S. - 190

## O

Ozeryanaya, I. N. - 36

## P

Panasjuk, O. A. - 116  
Papiashvili, Yu. I. - 182  
Pastukhov, É. A. - 17  
Paushkin, Ya. M. - 43  
Perov, V. L. - 68, 71, 93,  
113, 135, 166  
Pervikova, V. N. - 99  
Pistun, I. P. - 132  
Podolinskii, V. V. - 141  
Poluékton, V. A. - 122  
Poluyanovich, V. Ya. - 43  
Polyakov, V. A. - 61  
Posypaiko, V. I. - 11, 77, 99

Pustovalov, G. M. - 68  
 Prashchikina, A. S. - 74  
 Protsenko, T. G. - 116  
 Prozorovskaya, N. V. - 96

## R

Raskin, G. S. - 20  
 Revyako, M. M. - 43  
 Ryaboi, M. I. - 166

## S

Sakhnovskii, N. L. - 96  
 Sarkisov, P. D. - 66  
 Selivanov, P. I. - 39  
 Semochkin, I. I. - 166  
 Serafimov, L. A. - 3  
 Sergievskii, V. V. - 58  
 Shalaeva, L. F. - 160  
 Shamanova, N. D. - 36  
 Sharapov, B. N. - 46  
 Shcheglov, V. N. - 186  
 Shchukin, E. R. - 110  
 Shestopalov, V. V. - 178

Shevyakov, A. M. - 83  
 Shibanov, R. S. - 36  
 Shvurin, G. N. - 86  
 Shmaizer, R. - 26  
 Shter, G. E. - 77  
 Shumskii, V. F. - 138  
 Sizonenko, A. P. - 83  
 Smirnov, M. V. - 36  
 Sosenkin, V. E. - 63  
 Spiridinova, N. V. - 50  
 Spitsyn, V. I. - 104  
 Srytsova, A. Ya. - 103  
 Stratilatov, B. V. - 11  
 Strelko, V. V. - 119  
 Strongina, O. A. - 33  
 Svetlichnyi, I. B. - 190  
 Svistun, R. P. - 55

## T

Taran, Yu. N. - 141  
 Teslenko, A. G. - 132  
 Tkachenko, N. N. - 55  
 Trofimenko, A. V. - 83  
 Trunin, A. S. - 77  
 Tseitlin, Ya. M. - 144

## V

Varand, V. L. - 103  
 Varlamova, L. É. - 178  
 Vasil'chenko, E. I. - 96  
 Vasil'eva, L. I. - 103  
 Vasina, N. A. - 11  
 Vatolin, N. A. - 17  
 Vol'fkovich, S. I. - 33  
 Vol'fkovich, Yu. M. - 63  
 Volkonskii, B. V. - 144  
 Volkov, V. Ya. - 11  
 Volkova, A. V. - 129  
 Voyutskii, S. S. - 26

## Y

Yalamov, Yu. I. - 110  
 Yanchenko, D. F. - 24  
 Yashkin, V. V. - 46  
 Yudovich, B. É. - 182

## Z

Zabrudskii, V. T. - 146, 163  
 Zhavoronkov, N. M. - 146, 163  
 Zhuravlev, G. I. - 83

# TABLES OF CONTENTS

## DOKLADY CHEMICAL TECHNOLOGY

Volumes 226-231, 1976

(A translation of the Chemical Technology section of Doklady Akademii Nauk SSSR)

Engl./Russ.

### VOLUME 226, JANUARY-FEBRUARY 1976

Stabilization of One Class of Chemical Engineering Schemes — G. G. Genkin, S. S. Gluzman, and L. A. Serafimov . . . . .	3	147
Zirconium Evaporation Parameters as a Function of the Operating Atmosphere — V. B. Fedorov and P. I. Kalinin . . . . .	7	151
Calculating and Plotting Phase Diagrams of Multicomponent Salt Systems — V. I. Posypaiko, B. V. Stratilatov, V. Ya. Volkov, and N. A. Vasina . . . . .	11	394
Approximation Physical Modeling of Chemical Processes in a Plug Flow Reactor — E. I. Maksimov, A. G. Merzhanov, and A. A. Butakov . . . . .	13	895
Structure of Molten Iron Silicates — É. A. Pastukhov, N. A. Vatolin, V. L. Lisin, and E. M. Kern . . . . .	17	1136
Possibility of Improving the Corrosion Resistance of Stainless Steels by Lowering Their Manganese and Sulfur Contents — L. I. Freiman, G. S. Raskin, Academician Ya. M. Kolotyркиn, and É. A. Medvedev . . . . .	20	1140
Anomalous Relationship for the Change in the Electrical Resistance of Certain Crystal Hydrates with an Increase in Temperature in the Region of a Phase Transformation — D. F. Yanchenko and N. S. Lidorenko . . . . .	24	1144
Investigation of the Role of Radical Processes in the Formation of Autohesive Welded Joints — T. A. Belen'kaya, V. I. Mishustin, R. Shmaizer, B. G. Gerasimov, and S. S. Voyutskii . . . . .	26	1382
Coproduction of Ethylene and Propylene Oxides by the Hydroperoxide Process — M. I. Farberov, B. N. Bobylev, and D. I. Épshtein . . . . .	28	1384

### VOLUME 227, MARCH-APRIL 1976

Thermochemical Conversion in the Interaction of Monoammonium Phosphate with Carbamide — O. A. Strongina, L. V. Kubasova, and Academician S. I. Vol'fkovich . . . . .	33	160
Interaction of Steel, Titanium, and Zirconium with Fused Chlorides Containing Copper and Zinc — I. N. Ozeryanaya, T. I. Manukhina, B. S. Shibanov, N. A. Krasil'nikova, N. D. Shamanova, and M. V. Smirnov . . . . .	36	414
Photooxidation of Films from Polystyrene and Styrene Copolymers with Methyl Vinyl Ketone — S. S. Ivanchev, T. D. Korneva, P. I. Selivanov, and V. L. Maksimov . . . . .	39	922
Plasticization of Filled Polyethylene — M. M. Revyako, V. Ya. Poluyanovich, A. I. Kryukovskii, and Academician Ya. M. Paushkin . . . . .	43	926
Four-Parameter Equations for Calculating Thermodynamic Parameters of Solvate-Type Extraction Processes — B. N. Laskorin, V. V. Yashkin, and B. N. Sharapov . . . . .	46	1185
Investigation of "Alloyed" Silica Carrier Structures — B. M. Maslennikov, S. B. Kapilevich, N. V. Spiridinova, and I. A. Lobodyuk . . . . .	50	1416

## VOLUME 228, MAY-JUNE, 1976

Adsorption and Corrosion Influence of Liquid Media on the Cyclic Strength of Steel — B. I. Kultan, G. V. Karpenko, R. P. Svistun, N. N. Tkachenko. ....	55	156
Thermodynamics of the Extraction of Inorganic Compounds by the Hydrate-Solvate Mechanism — V. V. Sergievskii . . . . .	58	160
Investigation of Electrical Properties of Light-Sensitive Lithium-Aluminosilicate Glasses and Their Crystallization Products — A. I. Berezhnoi, A. A. Moshkin, and V. A. Polyakov . . . . .	61	412
Moisture-Transport Driving Force and Equations in Capillary-Porous Media — Yu. M. Vol'fkovich, A. V. Neimark, V. E. Sosenkin, and L. I. Kheifets . . . . .	63	415
Investigation of Sealing Cement Crystallization in the $PbO-ZnO-B_2O_3-SiO_2-TiO_2-Nb_2O_5$ System — A. I. Berezhnoi, I. A. Kumalagov, and P. D. Sarkisov . . . . .	66	663
Determining the Controllability of Complex Chemical Process Systems Using the Decomposition Principle — V. V. Kafarov, V. L. Perov, G. I. Mandrusenko, and G. M. Pustovalov . . . . .	68	666
Bilevel Method of Solving the Inverse Problem of Optimizing Chemical Process System Reliability — V. V. Kafarov, V. P. Meshalkin, V. L. Perov, and V. N. Ignatov . . . . .	71	904
Structure and Properties of Vulcanized Rubbers Produced by Use of Combined Vulcanizing Systems Based on 4,4'-Dithiobis-(phenylmaleimide) — N. A. Krashennnikov, A. S. Prashchikina, M. S. Fel'dshtein, and V. F. Evstratov . . . . .	74	907
Projection-Thermographic Method for Studying Ternary and Ternary-Interacting Systems — V. I. Posypaiko, A. S. Trunin, A. S. Kosmynin, and G. E. Shter . . . . .	77	911
Method for Evaluating the Parameters of State of Chemical-Engineering Processes on the Basis of Weight Functions of Objects — V. V. Kafarov, I. N. Dorokhov, and L. N. Lipatov . . . . .	80	1151
Study of IR Reflection Spectra of Glasses of $Na_2O \cdot 2SiO_2$ Composition in the 20-1050°C Range — A. M. Shevyakov, A. P. Sizonenko, A. V. Trofimenko, and G. I. Zhuravlev . . . . .	83	1155
Effect of Dielectric Properties of the Nonaqueous Phase on Extraction of Anions by Trialkylbenzylammonium Chloride — B. N. Laskorin, G. N. Shivrín, and L. P. Kolmakova . . . . .	86	1399

## VOLUME 229, JULY-AUGUST, 1976

Overall Optimization of Reliability Features of Large Scale Chemical Technological Systems — V. V. Kafarov, V. P. Meshalkin, V. L. Perov, and L. P. Lyashenko . . . . .	93	406
Process of Modifying cis-Polyisoprene with Oligoesteracrylates — S. M. Mezhirovskii, A. A. Berlin, I. K. Churakova, E. I. Vasil'chenko, R. Sh. Frenkel', N. V. Prozorovskaya, N. L. Sakhnovskii, and V. F. Evstratov . . . . .	96	410
Designing Experiments for Finding Invariant Points in Multicomponent Salt Systems — V. I. Posypaiko, V. N. Pervikova, and L. A. Dvadenko . . . . .	99	414
Precipitation of Mercury(II) by Calcium Phosphate — A. V. Nikolaev, V. L. Varand, L. I. Vasil'eva, and A. Ya. Syrtsova . . . . .	103	671
Electrochemical and Corrosion Characteristics of Technetium and Stainless Steels Alloyed with Technetium — V. I. Spitsyn, M. M. Kurtepov, and R. A. Baru . . . . .	104	673
Solution Method for Synthesizing Refractory Compounds — V. N. Gurin . . . . .	106	920
Thermodiffusiophoretic Capture of Nonvolatile Aerosol Particles by Growing or Evaporating Drops — B. V. Deryagin, Yu. I. Yalamov, E. R. Shehukin, and O. A. Barsegyan . . . . .	110	924
Algorithm for Optimizing Hydraulic Networks in Chemical Process Systems — V. V. Kafarov, V. P. Meshalkin, V. L. Perov, and V. V. Astashkin . . . . .	113	928
High-Temperature Oxidation of Iron-Silicon Alloys — V. A. Lavrenko, T. G. Protsenko, O. A. Panasyuk, E. V. Lysenko, and I. N. Frantsevich . . . . .	116	1180



Characteristics of Sorption of Bivalent Cations by Antimonic Acid Based Ion Exchange Resins — B. N. Laskorin, L. I. Bondarenko, V. V. Strelko, T. S. Kul'bich, and V. I. Denisov .....	119	1411
Kinetics of a Chain Reaction Initiated by Pulses — V. A. Poluéktov .....	122	1415

#### VOLUME 230, SEPTEMBER-OCTOBER, 1976

Macro- and Microstructure Changes and Phase Transformations in Producing Perlite Type Ceramic (Heat) Insulating Material — S. P. Kamenetskii, D. D. Kotelnikov, and A. V. Volkova .....	129	388
Steels Strengthened by Shock Waves: Substantial Reduction in Dangerous Interaction with Hydrogen — G. V. Karpenko, I. P. Pistun, A. B. Kuslitskii, A. G. Teslenko, and V. A. Duryagin .....	132	392
Automated Synthesis of Multicomponent Mixture Separation Systems — V. V. Kafarov, V. L. Perov, V. P. Meshalkin, and A. N. Kalmykov .....	135	395
Viscosity of Polypropylene Glycol Mixed with Polyethylene Glycol of Varying Molecular Weights — Yu. S. Lipatov, V. F. Shumskii, and I. P. Getmanchuk .....	138	908
Formation Mechanism of Eutectic Colonies in Camphor-Salol and Camphor-p-Dibromobenzene Melts — V. V. Podolinskii and Yu. N. Taran .....	141	1166
Production of Portland Cement Clinker in an Accelerated Electron Beam — I. G. Abramson, B. V. Volkonskii, S. I. Danyushevskii, G. B. Egorov, Yu. V. Nikiforov, and Ya. M. Tseitlin .....	144	1395
Calculating the Hydraulic Resistance of Two-Phase Film Upflow — N. M. Zhavoronkov, V. A. Malyusov, L. P. Kholpanov, and V. T. Zabrudskii .....	146	1398
Theory of Polymer Phase Structure Formation in Mass and Suspension Polymerization of Vinyl Chloride — V. V. Kafarov, C. Bulle, and L. N. Dorokhov .....	150	1402

#### VOLUME 231, NOVEMBER-DECEMBER, 1976

Finite Automaton as a Formal Model of a Complex Chemical-Engineering Process — V. V. Kafarov, V. V. Klimenko, and L. N. Dorokhov .....	157	155
Controlling the Molecular Weight Distribution of Polyethylene Synthesized Using Impregnated Ziegler Catalysts — A. A. Baulin, L. F. Shalaeva, and S. S. Ivanchev .....	160	413
Determination of the Average Tangential Stress on a Cylindrical Channel Wall with Concurrent Upflow of Phases — V. T. Zabrudskii, L. P. Kholpanov, V. A. Malyusov, and N. M. Zhavoronkov .....	163	416
Investigation of Heat-Cost Parameters of Process Streams — V. V. Kafarov, V. L. Emel'yanov, L. L. Semochkin, V. L. Perov, V. A. Ivanov, and M. I. Ryaboi .....	166	420
Combustion of Transition Metals in Hydrogen — S. K. Dolukhanyan, M. D. Nersesyan, A. B. Nalbandyan, L. P. Borovinskaya, and A. G. Merzhanov .....	169	675
Theory of Designing Crystallizers Based on the Concepts of Multiphase Media Mechanics — V. V. Kafarov, L. N. Dorokhov, and E. M. Kol'tsova .....	173	679
Synthesis and Investigation of New Polybenzimidazoleimides — A. A. Izyneev, D. M. Mogonov, A. I. Batotsyrenova, and V. V. Korshak .....	175	929
Effect of Nonuniform Distribution of Liquid and Vapor on Fractionation Column Efficiency — V. V. Kafarov, V. V. Shestopalov, Yu. A. Kommissarov, V. G. Efankin, and L. É. Varlamova .....	178	933
Spiral Form of Alite in Portland Cement Clinker — A. M. Dmitriev, Yu. S. Malinin, Yu. I. Papiashvili, and B. É. Yudovich .....	182	1411
Modeling of Complex Processes in Chemical Technology by Methods Based on Logic Algebra — V. V. Kafarov, V. N. Sheglov, and L. N. Dorokhov .....	186	1415
Vibrational Temperature of CO <sub>2</sub> in Nonequilibrium Streams Using Models of Vibration- Rotation Bands — N. N. Kudryavtsev, S. S. Novikov, and I. B. Svetlichnyi .....	190	1419
INDEX .....		
Author Index, Volumes 226-231, 1976 .....	195	
Tables of Contents, Volumes 226-231, 1976 .....	197	

447311X



